

## ABSTRACT

The invention provides a method and an apparatus for dithering, and inversely dithering an image. The apparatus makes use of a pixel address and a pixel data to locate a dither reference value from a dither matrix and use the dither reference value to convert an original pixel data having N bits into a dithered pixel data having M bits (N>M). On the other hand, the apparatus for performing an inversely dithering process makes use of the pixel address and the dithered pixel data (M bits) to locate a dither reference value from a dither matrix. Then, the dither reference value is employed to perform an inversely dithering process to recover the dithered pixel data into original pixel data.